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The study reported here was designed and carried out by Norman Walter under the direction of Muzafer Sherif with partial aid under a contract between the Office of Naval Research and the Research Institute of the University of Oklahoma. This report is a summary of Norman Walter's doctorate dissertation of the same title on file in the library of the University of Oklahoma.

In a study on "Ego Functioning: Elimination of Stable Anchorages in Individual and Group Situations" by Sherif and Harvey (to appear in Sociometry), it was shown that as the anchorages surrounding the individual in the situation become more unstable, his reactions become less stable and less certain. This was revealed both in the greater variability of judgments and in reports obtained from the subjects.

The present study by Dr. Norman Walter, "A Study of the Effects of Conflicting Suggestions upon Judgment in the Autokinetic Situation," investigates another phase of this general problem of the consequences of stability and instability of anchorages. The specific problem here is the effect on the individual of a conflict situation produced by the introduction of contradictory social norms, each coming from sources with high prestige value in the subject's eyes, and also the consequence of subsequent elimination of these social anchorages. As such it constitutes a contribution towards understanding the reaction of individuals caught in situations where social anchorages are contradictory and at times prove fallible-situations characteristic of many areas in modern life.

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A Study of the Effects of Conflicting Suggestions Upon Judgment in the Autokinetic Situation

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Most studies involving prestige suggestion to date have dealt with shifts in judgments or perceptions relative to those of an introduced prestige source. It must be recognized, however, that in everyday life one faces situations wherein a choice or judgment is required and the various relevant prestige figures or group norms are in conflict or are in contradiction to each other. There does not appear to be much research into what happens when the individual must make judgments in the face of a conflict between equally prestige-laden norms. This is essentially the question posed by Murphy, Murphy and Newcomb (1, p. 971). They ask what happens when the average, normally involved person is cast into a situation wherein he must make a decision, a judgment, in the face of conflict or contradiction among the presumably equipotent anchorage points.

There is yet another aspect of judgment situations which may be dealt with by a slight elaboration of the experimental situation. The type of situation referred to is that in which individuals are required to make judgments in the face of discredited anchorage points. The attempt shall be made to ascertain the type of judgments (in terms of direction and degree) a person or persons will make when one has destroyed the significance of the relationships between the judgments and the prestige figures. Stated in the form of a question, it has been asked, "What happens to individual judgments when the existing external anchorages have been discredited?"

Hypotheses:

In Sherif's 1935 study (2) he reports that in a series of individual experiments, "once a range, and a point of reference within that range, is established by an individual, there is a tendency to preserve these in the experiments on the subsequent days." Sherif had his subjects make a series of 400 judgments over a period of four sessions and he found that the median values for each session tended to remain the same as in the first session while the variability tended to be reduced. In the present experiment these findings receive a repeated check. Stating this finding in the form of an hypothesis to be tested: When the individual is repeatedly called upon to judge the amount of apparent movement he will ordinarily tend to maintain the same norm and reduce the variability of his judgments.

The second hypothesis being tested is that a suggestion which is reasonable, that is, within the limits of the subject's perceptual range, will serve as an anchorage and thereby cause a shift in norms and a reduction of variability.

The third hypothesis being tested is that a suggestion attributed to a source equally as good as a previous source of suggestion, but opposite in direction to the former suggestion, will create a conflict situation for the individual reflected by a rise in variability of judgments along with a shift in norms.

The fourth hypothesis being tested is that the discrediting of anchorage points will result in a relative rise in variability.

Within the theoretical framework in which this research is cast, it should be mentioned that it is believed that heightened variability reflects increased instability of the norms. In this regard then, there is the further hypothesis that associated with shifts in norms will be changes in variability.

Experimental Design

Twenty-five college students were utilized in an experiment which required them to expose themselves to the autokinetic situation on four separate occasions. Fifteen of the subjects were placed in the experimental group, ten were placed in the control group. Previous to being introduced to the "judgment of movement" situation, the experimental group subjects had been called upon to express themselves on a questionnaire designed to enable the experimenter to ascertain which two academic institutions the subject held in the highest esteem, that is, which two schools commanded a great deal of prestige in the eyes of the particular subject. The subjects did not know that there was any connection between the questionnaire and the subsequent experimental procedure. The questionnaire was usually administered at least a week before they were introduced to the autokinetic situation.

The first laboratory session was the same for all subjects. They were called upon to judge the distance through which they perceived a point of light to move; thirty-five successive judgments were recorded for each session.

For the subjects comprising the control group, all four sessions were the same; the subjects received no information of any kind alluding to the judgments. For both groups, each session was held from three to four days apart.

For the experimental group the second session was like the first, with the exception that just previous to arriving at the laboratory, the subject was casually informed of the distance judgments attributed to students like himself who were said to be attending one of the two schools which the subject had ranked at the top of the list in the questionnaire. The distance judgments were fictitious and were dependent upon the subject's own range of judgments made in the first session. The median value

of the suggested judgments was a value representing either the 10th or 90th percentile distance value given by the subject in the first session.

The third session was similar to the second session except that this time the subject in the experimental group received the information shortly before the experiment that at the second high prestige level school, as indicated on his questionnaire, the students in his major area of interest were judging the movements differently from those at the first mentioned institution. The median value of the second suggested range of judgments was either the 90th or 10th percentile value obtained from said subject in session I. In other words, the second suggestion was opposite in direction from the first suggestion, and it was attributed to an equally high prestige source.

The fourth session followed the third session by four days. Just previous to the fourth session the subject was made aware of the "fact" that both of the previously mentioned schools had informed the experimenter that their reported results were in error. The errors were attributed to either equipment failure or mistreatment of the data, excuses which the subjects readily accepted. The subjects were also told that these institutions were going to have the experiments re-run in order to get data in this area. It was felt that this type of information would operate to eliminate the effectiveness of either of the suggestions as anchorages.

The judgments of distances through which the subjects perceived the light to move constituted the raw data of the experiment. The analysis is designed to reveal the number of shifts in norms (central tendency) from session to session in each group. An analysis was also undertaken to ascertain the number of significant changes in variability that had taken place from session to session in each group. A third treatment indicated the comparative levels of variability for each session in each group, while still another treatment indicated the number and percentage of the intersessional comparisons which showed significant variability changes, significant shifts in norms, and significant changes in variability concomitant with significant shifts in norms. There is also an indication of the number of intersessional comparisons that indicated no significant changes of any kind.

Summary of the Results Relative to the Stated Hypotheses

1. Sherif's finding in his 1935 study regarding the tendency for repetition in the autokinetic situation to result in the maintenance of a personally evolved norm with a gradual reduction in the variability has been corroborated. (See Tables I and II.) The control group exhibited a drop in variability from session I to session IV which is significant at better than the .01 level of confidence. (See Table II.)

TABLE I

A SUMMARY OF THE NUMBER OF SIGNIFICANT (below 5% level of confidence) CHANGES IN CENTRAL TENDENCY (median shifts) AND SHIFTS IN VARIABILITY INCLUDING THE PERCENTAGE OF RESPONSES EXHIBITING THE SHIFTS.

Experimental group Sessions -	1&2	2&3	3&4	% CC*	1&3	2&4	1&4	Tot. No.	% Tot.**
Cent. tend. shifts	12	9	10	69	6	11	10	58	64
Variab. shifts	9	8	8	56	8	8	9	50	56
Control group									
Cent. tend. shifts	1	3	2	20	3	3	3	15	25
Variab. shifts	4	2	2	27	4	3	6	21	35

* Percent of the cases of contiguous comparisons showing significant shifts.
** Percent of the total comparisons showing significant shifts.

TABLE II

COMPARISON OF VARIABILITY: THE MEAN SUMS OF SQUARED DEVIATIONS FOR THE FOUR SITUATIONS WITHIN EACH OF THE TWO GROUPS FOR SIGNIFICANCE OF THE OBTAINED DIFFERENCES

Experimental		Control	
Situation	Mean Square Deviation	Situation	Mean Square Deviation
I	772.3094	I	236.7986
II	232.2420	II	154.1458
III	333.0829	III	149.6086
IV	407.9191	IV	97.5499

Significance of Differences

Comparisons	F.	p	Comparisons	F.	p
I & II	3.3255	<.01	I & II	1.5362	>.05
I & III	2.3187	<.01	I & III	1.5828	>.05
I & IV	1.8933	<.05	I & IV	2.4275	<.01
II & III	1.4342	>.05	II & III	1.0303	>.05
II & IV	1.7564	app .05	II & IV	1.5802	>.05
III & IV	1.2247	>.05	III & IV	1.5337	>.05

2. It was found that a suggested norm which was associated with a source of relatively high prestige value produced a large number of significant shifts in median values relative to the control sample. Eighty per cent of the cases in the experimental group showed significant norm changes from the first session to the second as compared with only 10 % such changes occuring in the control group. (See Table I.)

The suggestion of a norm also caused a reduction in variability in the second session of the experimental group. The reduction of variability in session II as compared to session I was significant at below the .01 level of confidence. Session II of the experimental group exhibited the lowest degree of variability for any session in that group. It was found too, that the reduction in variability following the introduction of a suggested norm was greater than the reduction which took place in the control group for the comparable session. (See Table II.)

3. Session III, the conflict session in the experimental group, reflected a sharp rise in variability which is particularly noteworthy in light of the fact that in the control group the variability for the third session tended to stay the same as it had been in the second session. (See Table II.) In the conflict situation there were again a relatively large number of shifts in central tendency accompanying the heightened variability. The higher variability has been interpreted as being indicative of a relatively low degree of organization of the individual's system of anchorages. The level of organization, however, seems to be better than that in the first situation in which the individual is completely new in the situation.

4. When the objective value of the conflicting anchorage points was destroyed the results indicated a rise in variability relative to the third session. The fourth session of the experimental group which reflects the disavowal of the previous suggestions tends to produce a rise in variability to a point where it is just barely significantly less than what it was in the first situation. (See Table II.)

5. It was found that the largest percentage of situational differences involved changes in central tendency concomitant with significant shifts in variability. It was further noted that when potential anchorages are in the picture, as in the experimental group, then variability changes are more likely to be accompanied by changes in central tendency than are changes in central tendency likely to be accompanied by changes in variability. In the control group the converse seemed to obtain. Variability changes were more prevalent than norm changes when internal factors were the only ones present. Norm changes were more prevalent than variability shifts when interposed anchorages were involved. (See Table III.)

In answer to the first question raised at the beginning, namely, "What happens when an individual is cast into a situation wherein he must make a decision in the face of conflicting or contradictory anchorages?" the following has been observed.

TABLE III

A SUMMARY OF THE NUMBERS AND PERCENTAGES OF VARIOUS COMBINATIONS OF CHANGES AND LACK OF CHANGES

Pattern of Changes	CONTROL GROUP				EXPERIMENTAL GROUP			
	Comparisons		Tot.	% of	Comparisons		Tot.	% of
	Contiguous	Non-con.	No.	G.T.	Con.	Non-C	No.	G.T.
Norm shifts accomp. by variability shifts.	2	4	6	10	19	17	36	40
Norm shifts not accomp. by variab. shifts.	4	5	9	15	12	10	22	24.4
Variability shifts not accomp. by norm shifts	6	9	15	25	6	8	14	15.5
Comparisons showing no shifts of any kind.	18	12	30	50	8	10	18	20

Most individuals evolve a norm different from the norm evolved in response to the first interposed anchorage or suggestion but the stability of this norm is not as great as the stability of the norm evolved in the non-conflict suggestion situation. The variability in session III in the experimental group shows a notable increase over the variability in session II. This receives added emphasis in light of what occurs in the control group. The third session in the control group reflects a slight decrease in variability from that of session II.

The second suggested norm is sometimes adhered to, but more often it appears that the individual will stay in the region of the first suggested norm or move to a point somewhere between the two suggestions, a point in the region of the norm evolved in the pre-suggestion situation.

In answer to the second question ("What happens to individual judgments when the external anchorages have been discredited?") it was noted that the variability increased above the level wherein there was a conflict in two still credible anchorages. For the most part, the

norms evolved tended to remain somewhere between the norms which had been evolved following suggestions but this was not true in all cases. Some individuals evolved norms in situation IV that were beyond the norms of situation II and III.

REFERENCES:

1. Murphy, G., Murphy, L., Newcomb, T. M. Experimental social psychology. New York: Harpers, rev.ed., 1937.

2. Sherif, M. A study of some social factors in perception. Arch Psychol., New York, 1935, No. 187.